

L2 ANSWER 2 OF 2 JAPIO COPYRIGHT 2001 JPO  
AN 1990-036734 JAPIO  
TI VOLTAGE CONTROLLER FOR VEHICLE GENERATOR  
IN MARUYAMA TOSHINORI; MATSUHASHI TOSHIKI  
PA NIPPON DENSO CO LTD, JP (CO 000426)  
PI JP 02036734 A 19900206 Heisei  
AI JP1988-186558 (JP63186558 Heisei) 19880726  
SO PATENT ABSTRACTS OF JAPAN, Unexamined Applications, Section: E, Sect. No.  
918, Vol. 14, No. 19, P. 21 (19900418)  
IC ICM (5) H02J007-24  
ICS (5) H02P009-30  
AB PURPOSE: To suppress the battery dark current when there is no leak  
current by operating a switching means for connecting a leak compensation  
resistor based on the output from a comparator for comparing the input  
terminal voltage with a constant voltage.  
CONSTITUTION: When an ignition switch 3 is not leaking current, voltage at  
the input terminal L is lower than a predetermined level and a switching  
means 14 does not function and thereby the current of a battery 5 is not  
consumed uselessly. When current leaks through the ignition switch 3,  
voltage at the input terminal L exceeds over the predetermined level.  
Consequently, a comparison means 12 produces an output signal and operates  
the switching means 14 to connect a leak compensation resistor 143 between  
the input terminal L and the earth. As a result, the leak current is  
absorbed and voltage rise at the input terminal L is prevented.

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5/22/01

L2 ANSWER 1 OF 2 WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD  
AN 1990-081250 [11] WPIX  
TI Voltage controller for car power generator - has switch for connecting  
current by-pass resistor between battery and ground NoAbstract Dwg 1/7.  
DC X13 X22  
PA (NPDE) NIPPONDENSO CO LTD  
CYC 1  
PI JP 02036734 A 19900206 (199011)\* 8p <--  
ADT JP 02036734 A JP 1988-186558 19880726  
PRAI JP 1988-186558 19880726  
IC H02J007-24; H02P009-30  
FS EPI  
FA NOAB; GI  
MC EPI: X13-G02A; X22-F02

5/22/01

L1 ANSWER 1 OF 1 INPADOC COPYRIGHT 2001 EPO

PATENT FAMILY INFORMATION  
AN 56791621 INPADOC

PRIORITY (1): JP 1988-186558

A 19880726

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JP 1988-186558 A 19880726

+-----PI-----+  
JP 02036734 A2 19900206  
JP 2707616B B2 19980204

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Search Text	
1	(( "4374380" ) or ( "4284936" ) or ( "4973896" ) or ( "4354182" ) or ( "5015918" ) or ( "5936317" ) or ( "5343844" ) or ( "3914092" ) or ( "5923095" ) or ( "6054818" ) or ( "6037726" ) or ( "4247813" ) or ( "5384516" ) or ( "5412378" ) or ( "4500977" ) or ( "6140915" ) or ( "5092602" ) or ( "5486002" ) or ( "5290037" ) or ( "5563479" ) or ( "5051666" ) or ( "5581172" ) or ( "5872721" ) or ( "3755709" ) or ( "4224562" ) or ( "5511087" ) or ( "5636233" ) or ( "5778017" ) or ( "4894553" ) or ( "5842300" ) or ( "5260641" ) or ( "5606226" ) or ( "5686819" ) or ( "4825647" ) or ( "5903104" ) or ( "6166525" ) or ( "4280161" ) or ( "5398024" ) or ( "6204643" ) or ( "5705807" ) or ( "6137237" ) or ( "5587865" ) or ( "5635723" ) or ( "5619108" ) or ( "4665397" ) or ( "4931789" ) or ( "4573046" ) or ( "5642626" ) or ( "5563578" ) or ( "4398128" ) ).PN.
2	( "322/28" ).CCLS.
3	(( "322/28" ).CCLS.) and ( "light emitting diode" or "LED" )
4	(( "322/28" ).CCLS.) and (light near emitting near diode)
5	(( "322/28" ).CCLS.) and "LED"
6	(( "322/28" ).CCLS.) and "lamp"
7	voltage near regulator and ( "light emitting diode" or "LED" )
8	voltage near regulator and ( "light emitting diode" )
9	(voltage near regulator and ( "light emitting diode" )) and "switch"
10	322/\$.ccls. and voltage near regulator and "light emitting diode"
11	JP-2707616-\$.did.
12	JP-02707616-\$.did.

	Search Text
13	JP-20707616-\$.did.
14	JP-02707616-\$.did.
15	JP-02036734-\$.did.
16	(("5491400") or ("5581172") or ("5923095") or ("5932993") or ("5900721") or ("6005372") or ("6204643")).PN.
17	("4570199").PN.

CLIPPEDIMAGE= JP402036734A  
PAT-NO: JP402036734A  
DOCUMENT-IDENTIFIER: JP 02036734 A  
TITLE: VOLTAGE CONTROLLER FOR VEHICLE GENERATOR

PUBN-DATE: February 6, 1990

INVENTOR-INFORMATION:

NAME  
MARIYAMA, TOSHINORI  
MATSUHASHI, TOSHIKI

ASSIGNEE-INFORMATION:

NAME  
NIPPON DENSO CO LTD

COUNTRY  
N/A

APPL-NO: JP63186558

APPL-DATE: July 26, 1988

INT-CL (IPC): H02J007/24; H02P009/30

US-CL-CURRENT: 307/107

ABSTRACT:

PURPOSE: To suppress the battery dark current when there is no leak current by operating a switching means for connecting a leak compensation resistor based on the output from a comparator for comparing the input terminal voltage with a constant voltage.

CONSTITUTION: When an ignition switch 3 is not leaking current, voltage at the input terminal L is lower than a predetermined level and a switching means 14 does not function and thereby the current of a battery 5 is not consumed uselessly. When current leaks through the ignition switch 3, voltage at the input terminal L exceeds over the predetermined level. Consequently, a comparison means 12 produces an output signal and operates the switching means 14 to connect a leak compensation resistor 143 between the input terminal L and the earth. As a result, the leak current is absorbed and voltage rise at the input terminal L is prevented.

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